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Jun 16, 1998

DOCUMENT-IDENTIFIER: JP 10158075 A

TITLE: PRODUCTION OF CERAMICS

FPAR:

PROBLEM TO BE SOLVED: To obtain a ceramics capable of freely controlling its particle size or pore diameter, excellent in carrying property for a medicine, affinity to a live body, sustained release property for a medicine and absorption property for live body and useful as a bone filler and a sustained release carrier for medicine by dropping a ceramic material onto a low temp. medium to freeze-dry the material and then sintering.

FPAR:

SOLUTION: The ceramics consisting preferably of calcium phosphate, more preferably of hydroxyapatite, tricalcium phosphate, calcium secondary phosphate, tetracalcium phosphate, octacalcium phosphate or the mixture thereof is pulverized, for example, preferably to $\leq 100\mu\text{m}$ particle size. Then the ceramic material is mixed with a binder slurry (such as PVA soln.) and dropped onto a low temp. medium (such as liquid nitrogen) to freeze while its spherical shape is maintained. The frozen material is dried to remove the water content while preventing defrosting, and further sintered at 800 to 1,500°C, preferably 1,000 to 1,400°C.

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